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| 10/058,514 | 01/28/2002 | Samuel N. Hansen | 71189-1370 | 5390 |

20915 7590 12/18/2003

MCGARRY BAIR PC
171 MONROE AVENUE, N.W.
SUITE 600
GRAND RAPIDS, MI 49503

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| EXAMINER |
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SNIDER, THERESA T

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| ART UNIT | PAPER NUMBER |
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1744

DATE MAILED: 12/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,514

Applicant(s)

HANSEN ET AL.

Examiner

Theresa T. Snider

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 540(page 4, line 19). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to because in figure 5 should one of the '586's be '588'?. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:
Exemplary of such:
Page 7, line 15, there is no 'Fig. 23'.
Page 8, line 21, 'disengage' should be replaced with 'disengaged'.
Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 1, line 15, 'a' should be replaced with 'the';

Line 24, 'the elliptical airflow' lacks proper antecedent basis.

Claims 2-26, line 1, 'A' should be replaced with 'The'.

Claim 2, line 1, 'flow' should be replaced with 'airflow'.

Claim 3, line 1, 'flow inhibitors' would be more appropriately replaced with 'at least one prong'.

Claims 4 and 26, line 2, it is unclear as to what is meant by 'extend a portion of the distance from the bottom wall and the separator plate'.

Claim 10, line 1, 'airflow inhibitors' would be more appropriately replaced with 'at least one fin'.

Claims 15-17, line 1, 'fins' should be replaced with 'at least one fin'.

Claim 18, line 1, 'flow' should be replaced with 'airflow'.

Claim 19, line 1, 'airflow inhibitors' would be more appropriately replaced with 'at least one fin'.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oh et al. in view of Conrad et al.('775).

Oh et al. discloses a similar vacuum cleaner however fails to disclose airflow inhibitors.

Oh et al. discloses a housing having a cyclonic airflow chamber with an inlet and outlet (fig. 3, #110,112,113).

Oh et al. discloses a nozzle housing (fig. 2, #50).

Oh et al. discloses an airsteam suction source (col. 3, lines 15-26).

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Oh et al. discloses a dirt-collecting bin (fig. 3, #120).

Oh et al. discloses a separator plate between the cyclonic airflow chamber and the bin wherein the plate has a diameter less than that of the airflow chamber (fig. 3, #130).

Conrad et al.('775) discloses a vacuum cleaner having airflow inhibitors in a dirt-collecting bin (fig. 14d, col. 10, lines 39-41). It would have been obvious to one of ordinary skill in the art to provide the airflow inhibitors of Conrad et al.('775) in Oh et al. to destructively interfere with the rotational motion of the airflow.

With respect to claims 2-3, Conrad et al.('775) discloses the airflow inhibitors being a plurality of prongs extending upwardly from the bottom wall of the bin (fig. 14d).

With respect to claim 4, it would have been obvious to one of ordinary skill in the art that the prongs of Oh et al. in view Conrad et al.('775) would extend in a distance between the bottom wall and the plate.

With respect to claim 5, Conrad et al.('775) discloses the prongs being rectangular in shape (col. 10, lines 48-50).

With respect to claim 6, Conrad et al.('775) discloses the prongs having a long axis that is radially disposed in the bin (fig. 14d).

With respect to claim 7, Conrad et al.('775) discloses the prongs being equal angularly spaced about the bottom (fig. 14d).

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Allowable Subject Matter

10. Claims 6-26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art discloses a vacuum cleaner with a housing having a cyclonic airflow chamber with an inlet and outlet, a nozzle housing, an airstream suction source, a dirt-collecting bin, a separator plate between the cyclonic airflow chamber and the bin wherein the plate has a diameter less than that of the airflow chamber and airflow inhibitors in the dirt-collecting bin **HOWEVER** fails to disclose or fairly suggest the airflow inhibitors including at least one fin that extends radially inwardly from a sidewall of the dirt-collecting bin.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Wednesday-Friday (6:30AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1300.

TTS

rs.s.J.

12/15/03

Theresa T. Snider
Primary Examiner
Art Unit 1744